

# INTERTEK TESTING SERVICES

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## RF Exposure

The equipment under test (EUT) is a Mono Speaker with Bluetooth function. The EUT was powered by the fully-charged DC 3.7V, 500mAh new rechargeable battery which was charged by USB port (DC 5V). For more detail information pls. refer to the user manual.

Modulation Type: GFSK for BT 4.0 and GFSK,  $\pi/4$ DQPSK, 8DPSK for BT 3.0+EDR.  
Bluetooth Version: 4.0 and 3.0 with EDR.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The nominal conducted output power specified: 5.0dBm +/-3dB.

The nominal radiated output power (e.i.r.p) specified: 5.0dBm (+/- 3dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 102.4dB $\mu$ V/m at 3m in the frequency 2480MHz of BT 3.0+EDR

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = 7.17dBm  
which is within the production variation.

The minimum peak radiated emission for the EUT is 98.4dB $\mu$ V/m at 3m in the frequency 2402MHz of BT 4.0

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = 3.17dBm  
which is within the production variation.

The maximum conducted output power specified is 8.0dBm = 6.3mW

The source- based time-averaging conducted output power  
= 6.3 \* Duty Cycle mW (where Duty Cycle  $\leq$  1)  
= 6.3 mW

The SAR Exclusion Threshold Level:

= 3.0 \* (min. test separation distance, mm) / sqrt(freq. in GHz)  
= 3.0 \* 5 / sqrt (2.480) mW  
= 9.5 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.